

AMENDMENTS TO THE CLAIMS

1. *(cancelled)*

2. *(previously presented)* A composition as claimed in claim 5, wherein the inhibiting agent has no ozone depletion potential.

3. *(previously presented)* A composition as claimed in claim 5, wherein the carrier gas is selected from the group consisting of air, carbon dioxide, argon, nitrogen and mixtures thereof.

4. *(previously presented)* A composition as claimed in claim 5, wherein each component of the composition has GWP of less than 3000.

5. *(currently amended)* A cover gas composition for the protection of molten magnesium/magnesium alloy from oxidation, consisting of a fluorine containing inhibiting agent in an effective amount [adapted] to inhibit the oxidation of the molten magnesium/magnesium alloy, selected from the group consisting of difluoromethane, pentafluoroethane, 1, 1, 1, 2-tetrafluoroethane, difluoroethane, heptafluoropropane, dihydrodecafluoropentane, hydrofluoroethers and mixtures thereof, and a carrier gas, wherein each component of the composition has a Global Warming Potential (GWP) (referenced to the absolute GWP for carbon dioxide at a time horizon of 100 years) of less than 5000.

6. *(previously presented)* A composition as claimed in claim 5 wherein the inhibiting agent has a boiling point of less than 100°C.

7. *(previously presented)* A composition as claimed in claim 5, wherein the hydrofluoroethers are selected from the group consisting of methoxy-nonafluorobutane, ethoxy-nonafluorobutane, and mixtures thereof.

8. *(previously presented)* A composition as claimed in claim 4 wherein each component of the composition has a GWP of less than 1500.

9. *(previously presented)* A composition as claimed in claim 7 wherein the inhibiting agent is 1, 1, 1, 2-tetrafluoroethane and the carrier gas is dry air.

10. *(cancelled)*

11. *(currently amended)* A composition as claimed in claim ~~[10]~~ 5 containing up to less than 0.5% by volume inhibiting agent.

12. *(previously presented)* A composition as claimed in claim 11, containing up to less than 0.1% by volume inhibiting agent.

13. – 32. *(cancelled)*

33. *(previously presented)* A composition as claimed in claim 7, wherein the inhibiting agent is 1, 1, 1, 2-tetrafluoroethane and the carrier gas is selected from the group consisting of nitrogen, carbon dioxide and mixtures thereof.

34. *(currently amended)* A method of protecting molten magnesium/magnesium alloy from oxidation, comprising blanketing the magnesium/magnesium alloy with a cover gas composition consisting of a fluorine containing inhibiting agent in an effective amount [adapted] to inhibit
5 the oxidation of the molten magnesium/magnesium alloy, selected from the group consisting of difluoromethane, pentafluoroethane, 1, 1, 1, 2-tetrafluoroethane, difluoroethane, heptafluoropropane, dihydrodecafluoropentane, hydrofluoroethers,

and mixtures thereof, and a carrier gas, wherein each component of the composition has a Global Warming Potential (GWP) (referenced to the absolute
10 GWP for carbon dioxide at a time horizon of 100 years) of less than 5000.

35.-38. (*cancelled*)

39. (*currently amended*) A method as claimed in claim [37] 34, wherein the inhibiting agent is 1, 1, 1, 2-tetrafluoroethane.

40. (*previously presented*) A method as claimed in claim 34, wherein said fluorine containing inhibiting agent is a hydrofluoroether.

41. (*previously presented*) A method as claimed in claim 40, wherein said hydrofluoroether is selected from the group consisting of methoxynonafluorobutane, ethoxynonafluorobutane, and mixtures thereof.

42. (*cancelled*)

43. (*previously presented*) A method as claimed in claim 34, wherein said carrier gas is selected from the group consisting of air, CO₂, argon, nitrogen, and mixtures thereof.

44. (*currently amended*) A method for protecting an exposed surface of molten magnesium/magnesium alloy from oxidation in ambient air, comprising: contacting the exposed surface of the molten magnesium/magnesium alloy with a gaseous mixture consisting of a fluorine containing inhibiting agent
5 in an effective amount [adapted] to inhibit the oxidation of the molten magnesium/magnesium alloy, selected from the group consisting of difluoromethane, pentafluoroethane, 1, 1, 1, 2-tetrafluoroethane, difluoroethane, heptafluoropropane, dihydrodecafluoropentane, hydrofluoroethers,

and mixtures thereof, and a carrier gas to form a protective film/layer on the
10 surface of said molten magnesium/magnesium alloy.

45. *(cancelled)*

46. *(currently amended)* A method as claimed in claim [45,] 44, wherein said carrier gas is selected from the group consisting of air, CO₂, argon, nitrogen, and mixtures thereof.

47-48. *(cancelled)*

49. *(previously presented)* A method as claimed in claim 44, wherein the inhibiting agent is 1, 1, 1, 2-tetrafluoroethane.

50. *(previously presented)* A method as claimed in claim 44, wherein said fluorine containing inhibiting agent is a hydrofluoroether.

51. *(previously presented)* A method as claimed in claim 50, wherein said hydrofluoroether is selected from the group consisting of methoxynonafluorobutane, ethoxynonafluorobutane, and mixtures thereof.

52. *(previously presented)* The composition of claim 5, wherein the amount of fluorine containing inhibiting agent in the cover gas composition varies from the minimum amount effective to inhibit the oxidation of the molten magnesium/magnesium alloy up to less than 1% by volume of the cover gas composition.

53. *(previously presented)* The method of claim 34, wherein the amount of fluorine containing inhibiting agent in the cover gas composition varies from the minimum amount effective to inhibit the oxidation of the molten

magnesium/magnesium alloy up to less than 1% by volume of the cover gas composition.

54. (*previously presented*) The method of claim 44, wherein the amount of fluorine containing inhibiting agent in the cover gas composition varies from the minimum amount effective to inhibit the oxidation of the molten magnesium/magnesium alloy up to less than 1% by volume of the cover gas composition.

55. (*new*) A composition as claimed in claim 5, wherein the inhibiting agent is selected from the group consisting of difluoromethane, pentafluoroethane, 1, 1, 1, 2-tetrafluoroethane, difluoroethane, heptafluoropropane, dihydrodecafluoropentane, and mixtures thereof.

56. (*new*) A method as claimed in claim 34, wherein the inhibiting agent is selected from the group consisting of difluoromethane, pentafluoroethane, 1, 1, 1, 2-tetrafluoroethane, difluoroethane, heptafluoropropane, dihydrodecafluoropentane, and mixtures thereof.

57. (*new*) A method as claimed in claim 44, wherein the inhibiting agent is selected from the group consisting of difluoromethane, pentafluoroethane, 1, 1, 1, 2-tetrafluoroethane, difluoroethane, heptafluoropropane, dihydrodecafluoropentane, and mixtures thereof.